THE CHEMICAL SAFETY TOPICAL COMMITTEE (CSTC) -- *MAKING A DIFFERENCE*

Introduction

The joint Energy Facility Contractors Group (EFCOG)/DOE Chemical Safety Topical Committee (CSTC) is a major part of the EH-5 Chemical Management Program.

The CSTC, chartered in 1998, is jointly sponsored by the EFCOG and the DOE Office of Worker Protection Policy and Programs. It provides a forum for the teaming of DOE and DOE contractor managers and technical professionals to identify chemical-related safety and health issues of concern to the DOE and its contractors and to pursue pathways to the resolution of those issues. This teaming of line management and contractor organizations results in the efficient and cost effective implementation of DOE Environment Safety & Health policies such as those of Integrated Safety Management (ISM), supports development of comprehensive and effective safety and health policy that promotes and enhances DOE worker health and safety.

Background

The CSTC was formed as a result of the Management Response Plan for the 1994 Chemical Vulnerability Working Group Report, which called for DOE to "…expand its chemical safety activities to promote an outreach program among the DOE site contractors and private-sector organizations dedicated to chemical safety management." The CSTC is a vehicle for DOE's chemical management activities and outreach among the DOE, site contractors and private sector organizations.

Description

The CSTC is co-chaired by the chair of the Chemical Safety Subgroup of EFCOG's Safety Analysis Working Group (SAWG) and the Director of the DOE Office of Worker Protection Policy and Programs.

The CSTC membership includes approximately 250 DOE federal, and DOE contractor managers and professional staff as well as participants from other Federal agencies and the private sector, and staff members of the DNFSB, who participate in CSTC activities.

Making a Difference…

The CSTC encourages enhanced communication, cooperation and information-sharing across the sites and among DOE site contractors and creates opportunities for learning and sharing ideas about safety management principles, programs and tools, addressing such topics as integrated safety management, developing a sound safety culture, and continuous safety improvement. The CSTC provides a venue for line management and contractor organizations to take actions that promote and result in the efficient and cost-effective implementation of DOE ES&H policies.

The CSTC holds annual Chemical Management Workshops in Washington, D.C. that are video-linked across the DOE complex to examine emerging issues and allow for the broad exchange of best practices and lessons learned information and experiences that promote continuous improvement and excellence in chemical management. Lessons learned and other information derived from these workshops help to strengthen worker protection and safety and health programs at DOE sites, conserve resources through the sharing of effective tools and methodologies and help prevent the often costly consequences of unsafe practices.

The annual CSTC Chemical Management Workshop provides an opportunity for the dissemination of information on innovative programs and practices and encourages DOE sites to share and adapt these programs, practices and tools to minimize their chemical management costs.

During each year's workshop, chairs of the CSTC project teams report on their teams' progress through the preceding year and participating members select new CSTC projects for work by new volunteer project teams in the coming year. All projects selected annually for CSTC attention reflect the expressed needs of the DOE and its contractors and encourage a comprehensive and consistent understanding of, and approach to identifying and addressing DOE's chemical management issues and concerns.

The CSTC projects provide a cost-effective resource sharing opportunity with an Integrated Safety Management (ISM) approach to chemical management programs across DOE Field and HQ Organizations. CSTC members volunteer to participate on project teams that produce guidance, handbooks and model program materials to aid DOE and DOE

contractor line managers in the successful implementation of their chemical management responsibilities. All CSTC documents of merit are maintained on the DOE Chemical Management website.

CSTC's Value to the DOE Complex…

The CSTC is a vehicle for DOE and its contractors in the field and at Headquarters to identify chemical management issues of concern to them and to select products they believe will serve them in addressing those issues. Our customers are DOE and contractor line managers and professional staff. Each year, at the CSTC's Joint DOE/EFCOG Chemical Management Workshop, our customers identify the products for the CSTC's volunteer teams to work on that they expect will add value to their overall chemical management programs.

Testimonials.

The following commentaries by participants in CSTC activities and projects support the finding of value added that the CSTC provides in the management of chemicals throughout the DOE Complex:

- Butch Byers, Manager, Air Quality and Hazardous Materials Group, Stanford Linear Accelerator Center (SLAC): "As a staff member of an Office of Science laboratory with far fewer financial resources than the larger DOE facilities, I can tell you the existence of the CSTC, the contacts it has enabled us to make, and in particular the three volumes of the DOE Chemical Management Handbook have been a godsend to our facility. We clearly would have spent tens of thousands, if not hundreds of thousands, of dollars we don't have if we had not had access through the CSTC to the people and best management practices that exist in the DOE complex as a whole."

- Jim Goss, National Nuclear Security Administration, Y-12 Site Office: "The CSTC provides a focal point for chemical safety and the web site provides a multitude of resources. In my work, I often use the web site to verify information provided by the contractors when chemicals are analyzed in safety basis documents for both nuclear and non-nuclear facilities. The (CSTC) organization also provides opportunities to learn about new methods and means of working safely with chemicals and evaluating risks. Additionally, the contacts made through the organization provide networks to resolve issues or questions such as our recent need at Y-12 to verify information regarding beryllium and beryllium oxide. I started with contacts I had made through CSTC."

- C.J. Satterwhite, Jr., Bechtel Jacobs Company, LLC: "I consider the annual workshop one of the best benchmarking activities I can do. For our program, it's the best gauge of success and level of consistency with the other sites."

- Steve Woodbury, DOE/EH-413 "I think that one commendable and beneficial aspect of the CSTC has been the success in producing cross-disciplinary requirement summaries -- not just chemical requirements and fire safety requirements, but also integrating environmental requirements as well…. (This) sets an excellent example for other activities in EH and in the Department."

- David Travis, SRS: "The (Chemical Management) handbook is a handy 'quick reference' for best practices to implement a Chemical Management Program, both for new programs and for programs already established."

- Jim Morgan, Manager, SRS: "SRS has used many of the products from the CSTC. The one I will address is the Chemical Management Handbook, which I have been heavily involved in developing. Since the (CSTC) Handbook (Volumes 1 and 2) has been published I have been contacted by organizations within the DOE complex and outside the complex about information provided in the Handbook.… Contractors that are designing, and will build the new Mixed Oxide Facility for DOE at SRS, are using the (CSTC) Handbook to establish their Chemical Program; The University of Pennsylvania contacted SRS and benchmarked our Chemical Management Program after reading Volumes 1 and 2 of the Handbook on the web; The DFNSB has contacted me about information in the handbook for use in reviewing chemical programs across the complex; and SRS has used the draft Volume 3 of the handbook during its development, to perform a gap analysis on our polices, and procedures to ensure compliance."

- Judi Johannesen, Resource Conservation & Recycling Coordinator, PNNL: "…Just in the last year, the CSTC Chemical Management Handbook Vol. (3), Consolidated Chemical User Safety and Health Requirements, Chapter 9 on Chemical Disposition provided the review of all the requirements that I needed to establish an active chemical redistribution program, and Chapter 7 on Consolidated Safety and Health Requirements for Pollution Prevention and Waste Minimization, provided a thorough review of the (regulatory) drivers for our P2 program that has jump-started

a number of efforts at PNNL, including development of a construction contracts clause to flow down environmental requirements to contractors….(In) general, I think that it makes excellent sense to conserve the effort needed to do exhaustive tasks that have broad application by sharing the results across the Complex, particularly where such results impact the health and safety of workers, neighbors, and the environment. That is good stewardship of taxpayer investment."

- Jeanie Polehn, Sr. Regulatory Technical Advisor, Radiological Controls, DOE/ORP/OSR, RL: "I use the CSTC information to help with radiation protection oversight as well as chemical oversight for the Waste Vitrification Plant here at Hanford (i.e., the radioactive materials are in a chemical form so they have not only a radiation hazard but a chemical hazard so the chemical safety aspects are an important safety consideration [e.g., ISM approach]; the chemical safety guidelines are useful as a guide/comparison for radiation protection activities; the CSTC group serves as a useful resource for obtaining information; use of alternate materials are considered)….."

- Fred Simmons, SRS: "The single most important contribution to chemical safety has been the development of the (Chemical Management) handbook and the other projects that have produced, or will produce topical papers on various aspects of chemical safety. The annual workshop has spawned several excellent examples such as:
    - Two (possibly three) papers addressing "Time Sensitive" chemical products to be published in ACS (peer reviewed) journals.
    - Collection of "Case Studies" with respect to exposures during closure activities.
    - Examination of past incidents with root cause analysis.

  One of the most valuable benefits to me personally has been the interaction with folks at other sites, both at the conference (annual workshop) and via conference calls while developing these papers. All of us involved have learned a great deal about the topics and how individual sites approach the problems associated with the safe use and storage of chemical products. We will all have stronger programs as a direct result of these CSTC projects! We have clearly demonstrated that teamwork can and does extend outside the bounds of individual sites to encompass the complex.

- JC Laul, LANL: "The (CSTC) report…on 'Current Chemical Hazard Characterization Practices in the DOE Complex', Phase 1…has been…very useful in finding out how each contractor at each DOE site performs its CS practices….(The) Non-nuclear arena is gaining wide recognition because of serious chemical accidents (that have occurred) at Y-12, LANL, and other DOE sites."

- David Quigley, D. R. Quigley and Associates: "The CSTC is maturing into a an organization where the committees are getting better and better, presentations are receiving recognition as being relevant, and CSTC products are beginning to make a significant difference. The CSTC is at a nexus…chemical accidents result in 12-13% of all injuries in the DOE complex and over 80% of all chemical accidents result from a failure to identify the hazard. A recent IG report on shock sensitive chemicals…calls for a change in DOE documentation to require the more effective management of chemicals…. This is only now possible in a realistic and efficient sense now that Volume 3 of the (CSTC's) Chemical Management Handbook is being published. This volume of the handbook will allow DOE to see where holes in the regulatory literature exist and will aid in the 'modification of DOE documentation'…. In addition, the annual CSTC workshop is very valuable. Presentations are of a high quality and provide great information. Just as important, however, are those conversations that occur during breaks, lunches and in the evenings. These conversations allow people to gain contacts, exchange ideas, and generally facilitate communications between sites. Participating on a project team also provides these benefits. This is important since many times we need to talk to others in order to gain information and insights on how to do something, information on whether or not something is hazardous, etc. It also provides an informal way of benchmarking ideas, methods, etc., across the complex."

- Dennis Gracy, WSRC: "The single greatest value that I personally have for the CSTC involves the complex wide distribution of lessons learned. Although most, if not all, of the sites have some form of lessons learned program, it is only through the broad distribution of those lessons that the maximum value is obtained."

- Murty Kuntamukkula, SRS: "The initiation of a CSTC…project three years ago, beginning with…(the) chapter on "Chemical Storage" as the first of a series of chapters that culminated in the recent completion of Volume 3 of DOE Chemical Management Handbook is an example of outstanding collaboration between DOE-HQ and various DOE sites. The availability of a single document consolidating the various federal regulatory and DOE requirements related to chemical management activities is very helpful to those of us involved in developing and updating site procedures and in preparing self-assessment checklists. Another useful CSTC offering is the annual DOE/EFCOG conferences that are televised to DOE sites. In particular, the proceedings related to unstable/reactive chemicals have provided the viewers with the current thinking among the U.S. Chemical Safety Board, the Center for Chemical Process Safety, regulatory agencies, and industry participants."

Publications.

- The CSTC's Chemical Management Handbook Volume 1, published as a DOE Technical Standard. This "core" Handbook provides an overview of the elements of an effective chemical management program. Through the extensive use of 'hot' links to the world wide web it provides an extensive reference for anyone wis hing to better understand chemical management.

- CSTC's Chemical Management Handbook, Volume 2 published as a DOE Technical Standard. This volume supplements the core Handbook (Volume 1) with site approaches to chemical management programs from across the DOE Complex and from the chemical industry to illustrate chemical management program implementation.

- CSTC's Chemical Management Handbook, Volume 3 completed and awaiting publication as a DOE Technical Standard. This volume supplements the core Handbook with consolidated chemical user safety and health requirements (the CSTC's Requirements Roadmap project) organized into 10 subject areas that parallel the 10 chapters of the core Handbook (Vol. 1).

- CSTC's "Integration of Multiple Hazard Analysis Requirements and Activities Handbook" published as a DOE Technical Standard.

- Comprehensive summaries the CSTC's workshop proceedings posted on the Chemical Management web page;